UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/507,353	09/10/2004	Frank Hundscheidt	P16486-US1	5673

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EXAMINER
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ART UNIT	PAPER NUMBER
2617	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

	Application No.	Applicant(s)
Office Action Summary	10/507,353	HUNDSCHEIDT ET AL.
	Examiner	Art Unit
	ARIEL BALAOING	2617

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>10 September 2004</u>.
2a)☐ This action is **FINAL**.　　2b)☒ This action is non-final.
3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-21</u> is/are pending in the application.
　　4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5)☐ Claim(s) _____ is/are allowed.
6)☒ Claim(s) <u>1-21</u> is/are rejected.
7)☐ Claim(s) _____ is/are objected to.
8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.
10)☒ The drawing(s) filed on <u>10 September 2004</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.
　　Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
　　Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
　　a)☒ All　b)☐ Some * c)☐ None of:
　　　1.☐ Certified copies of the priority documents have been received.
　　　2.☐ Certified copies of the priority documents have been received in Application No. _____.
　　　3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
　　* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)
1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
　　Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
　　Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____ .

DETAILED ACTION

Priority

1.   Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which

papers have been placed of record in the file.

Claim Rejections - 35 USC § 101

2.   35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of
> matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the
> conditions and requirements of this title.

Claim 19 is rejected under 35 U.S.C. 101 because the claimed invention is

directed to non-statutory subject matter.

Claim 19 is drawn to a "program" *per se* as recited in the preamble and as such

is non-statutory subject matter. See MPEP § 2106.IV.B.1.a. Data structures not

claimed as embodied in computer readable media are descriptive material *per se* and

are not statutory because they are not capable of causing functional change in the

computer. See, e.g., *Warmerdam*, 33 F.3d at 1361, 31 USPQ2d at 1760 (claim to a

data structure *per se* held nonstatutory). Such claimed data structures do not define

any structural and functional interrelationships between the data structure and other

claimed aspects of the invention, which permit the data structure's functionality to be

realized. In contrast, a claimed computer readable medium encoded with a data

structure defines structural and functional interrelationships between the data structure

and the computer software and hardware components which permit the data structure's

functionality to be realized, and is thus statutory. Similarly, computer programs claimed

as computer listings *per se*, i.e., the descriptions or expressions of the programs are not

physical "things." They are neither computer components nor statutory processes, as they are not "acts" being performed. Such claimed computer programs do not define any structural and functional interrelationships between the computer program and other claimed elements of a computer, which permit the computer program's functionality to be realized.

Examples of acceptable language in computer-processing related claims :

1.   "computer readable medium" encoded with _____
        [a] "a computer program"
        [b] "software"
        [c] "computer executable instructions"
        [d] "instructions capable of being executed by a computer"

2.   "a computer readable medium" _____ "computer program"
        [a] storing a
        [b] embodied with a
        [c] encoded with a
        [d] having a stored
        [e] having an encoded

Claim Rejections - 35 USC § 102

3.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4.   Claims 1, 6, 9-15, 19-21 are rejected under 35 U.S.C. 102(e) as being anticipated by WINCHELL et al (US 2002/0151321 A1).

Regarding claim 1, WINCHELL discloses a method of managing point-to-multipoint services in a mobile communication network **22** (abstract; paragraph 1-3), said method comprising: receiving from a mobile station [**communication device**] a request for accessing a point-to-multipoint service (Figure 7, 8), said request comprising a subscriber identifier of the subscriber placing the request and a point-to-multipoint service identifier of the point-to-multipoint service for which access is being requested (paragraph 33, 39, 43, 44; providing a subscriber identifier is inherently necessary to provide both billing and group setup. Parameters and/or mode of a group can be determined by requesting device), storing a subscriber identification for the subscriber placing the request in association with a point-to-multipoint service identification for the point-to-multipoint service for which access is being requested (paragraph 39, 43), performing an access enabling procedure, and providing accounting information to an accounting entity of said mobile communication network in which accounting for the point-to-multipoint service is performed considering a number of subscribers, who placed the request for accessing the point-to-multipoint service and a provider of the point-to-multipoint service, said accounting information identifying the subscriber who placed the request together with the point-to-multipoint service for which access was requested (paragraph 37, 38, 43; accounting determines a number of subscribers for billing purposes. Furthermore, account information identifies both initiator and group members of a group call).

Regarding claim 6, see the rejections of the parent claim concerning the subject matter this claim is dependent upon. WINCHELL further discloses wherein said

accounting is also performed on the basis of the amount of data transported (paragraph

46; billing based on amount of received messages).

Regarding claim 9, see the rejections of the parent claim concerning the subject

matter this claim is dependent upon. WINCHELL further discloses wherein after

performing said access enabling procedure, waiting for the receipt of a service access

confirmation, and said accounting information is only provided to said accounting entity

if said service access confirmation is received (paragraph 45, 46; billing based on a

recorded usage time).

Regarding claim 10, see the rejections of the parent claim concerning the subject

matter this claim is dependent upon. WINCHELL further discloses wherein the

subscriber identifications and associated point-to-multipoint service identifications are

stored in a centralized point-to-multipoint service data base for said mobile

communication network (paragraph 37, 38; Figure 2; central billing log server).

Regarding claim 11, see the rejections of the parent claim concerning the subject

matter this claim is dependent upon. WINCHELL further discloses wherein a

classification of point-to-multipoint services into categories is provided, said accounting

information identifying the category of the point-to-multipoint service, and said

accounting of the point-to-multipoint service is performed depending on the identified

category (paragraph 37, 43-45; mode determination).

Regarding claim 12, see the rejections of the parent claim concerning the subject

matter this claim is dependent upon. WINCHELL further discloses further comprising

storing one or more counter values in association with a stored subscriber identification

and/or point-to-multipoint service identification (paragraph 37; participation time).

Regarding claim 13, see the rejections of the parent claim concerning the subject

matter this claim is dependent upon. WINCHELL further discloses further comprising:

providing said one or more counter values as a part of said accounting information

(paragraph 37; participation time).

Regarding claim 14, see the rejections of the parent claim concerning the subject

matter this claim is dependent upon. WINCHELL further discloses wherein said one or

more counter values comprise one or more of the following: a time counter value

associated with each stored subscriber identification, indicating a time period that has

passed since receiving a request from said subscriber, a time counter value associated

with each stored point-to-multipoint service identification, indicating a time period that

has passed since receiving a first request identifying said point-to-multipoint service, an

event counter value associated with each stored subscriber identification, indicating a

number of predetermined events that have occurred since receiving a request from said

subscriber, and an event counter value associated with each stored point-to-multipoint

service identification, indicating a number of predetermined events that have occurred

since receiving a first request identifying said point-to-multipoint service (paragraph 37;

participation time).

Regarding claim 15, see the rejections of the parent claim concerning the subject

matter this claim is dependent upon. WINCHELL further discloses wherein said access

enabling procedure comprises: sending an enable signal to a service provision control

entity (paragraph 34, 35; communication manager determines if communication device

is authorized).

Regarding claim 19, WINCHELL discloses a computer program product

[**software**], within a computer readable medium, for managing point-to-multipoint

services in a mobile communication network (abstract; paragraph 1-3), the computer

program product comprising: instructions for receiving from a mobile station a request

for accessing a point-to-multipoint service (Figure 7, 8), said request comprising a

subscriber identifier of the subscriber placing the request and a point-to-multipoint

service identifier of the point-to-multipoint service for which access is being requested

(paragraph 33, 39, 43, 44; providing a subscriber identifier is inherently necessary to

provide both billing and group setup. Parameters and/or mode of a group can be

determined by requesting device), instructions for storing a subscriber identification for

the subscriber placing the request in association with a point-to-multipoint service

identification for the point-to-multipoint service for which access is being requested

(paragraph 39, 43), instructions for performing an access enabling procedure

(paragraph 43, 44), and instructions for providing accounting information to an

accounting entity of said mobile communication network in which accounting for the

point-to-multipoint service is performed considering a number of subscribers, who

placed the request for accessing the point-to-multipoint service and a provider of the

point-to-multipoint service (paragraph 37, 38, 43), said accounting information

identifying the subscriber who placed the request together with the point-to-multipoint

service for which access was requested (paragraph 37, 38, 43; a number of subscribers

is determined for billing purposes. Furthermore, account information identifies both initiator and group members of a group call).

Regarding claim 20, WINCHELL discloses an accounting entity of a mobile communication network **22**, said accounting entity comprising: a receiver for receiving accounting information (abstract; paragraph 1-3; it is further noted that a receiver, memory and processor would inherently be necessary to process and stored detailed billing records and account information), said accounting information identifying a subscriber placing a request for a point-to-multipoint service, and identifying a point-to-multipoint service for which access was requested a processor for performing accounting for the point-to-multipoint service identified in the accounting information considering a number of subscribers, who placed the request for accessing the point-to-multipoint service and a provider of the point-to-multipoint service (paragraph 33, 39, 43, 44; providing a subscriber identifier is inherently necessary to provide both billing and group setup. Parameters and/or mode of a group can be determined by requesting device), wherein said processor is arranged such that if said accounting information indicates the number of subscribers corresponding to all or a predetermined part of the subscribers currently stored by a point-to-multipoint service data base entity in association with said point-to-multipoint service, said accounting depends on the indicated number of subscribers (paragraph 37, 38, 43; a number of subscribers is determined for billing purposes. Furthermore, account information identifies both initiator and group members of a group call).

Regarding claim 21, see the rejections of the parent claim concerning the subject

matter this claim is dependent upon. WINCHELL further discloses wherein said point-

to-multipoint service data base entity comprises: a receiver for receiving from a mobile

station a request for accessing a point-to-multipoint service (paragraph 37, 38, 43;),

said request comprising a subscriber identifier of the subscriber placing the request and

a point-to-multipoint service identifier of the point-to-multipoint service for which access

is being requested, a memory for storing a subscriber identification for the subscriber

placing the request in association with a point-to-multipoint service identification for the

point-to-multipoint service for which access is being requested (paragraph 37, 38, 43), a

processor for providing accounting information to an accounting entity of said mobile

communication network, said accounting information identifying the subscriber placing

the request, together with the point-to-multipoint service for which access was

requested (paragraph 37, 38, 43). It is further noted that a receiver, memory and

processor would inherently be necessary to process and stored detailed billing records

and account information

Claim Rejections - 35 USC § 103

5.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

6.   The factual inquiries set forth in *Graham* v. *John Deere Co.*, 383 U.S. 1, 148

USPQ 459 (1966), that are applied for establishing a background for determining

obviousness under 35 U.S.C. 103(a) are summarized as follows:

> 1.   Determining the scope and contents of the prior art.
> 2.   Ascertaining the differences between the prior art and the claims at issue.
> 3.   Resolving the level of ordinary skill in the pertinent art.
> 4.   Considering objective evidence present in the application indicating obviousness or nonobviousness.

7.   Claims 2, 3, 7, and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable

over WINCHELL et al (US 2002/0151321 A1) in view of HERZOG et al., IEEE/ACM

Transactions of Networking, Vol. 5, No. 6, "Sharing the "Cost" of Multicast Trees: An

Axiomatic Analysis" (hereinafter HERZOG).

Regarding claim 2, see the rejections of the parent claim concerning the subject

matter this claim is dependent upon. WINCHELL further discloses wherein in addition

to identifying a point-to-multipoint service, said accounting information indicates a

number of subscribers (paragraph 37, 38; detailed account listing of users and billing).

However, WINCHELL does not expressly disclose wherein said indicated number

corresponding to all or a predetermined part of the subscribers currently stored in

association with said point-to-multipoint service. In the same field of endeavor,

HERZOG discloses wherein an indicated number corresponding to all or a

predetermined part of the subscribers currently stored in association with said point-to-

multipoint service (page 847, abstract, Section I (paragraph 2-4), Section II (paragraph

1-2); page 851, section IV-B; cost allocation dependent on upstream and downstream

receivers). Therefore it would have been obvious to a person of ordinary skill in the art

at the time the invention was made to modify WINCHELL to include the teachings of

HERZOG, since HERZOG states that such a modification would provide cost

association based on a receivers network usage.

Regarding claim 3, see the rejections of the parent claim concerning the subject

matter this claim is dependent upon. The combination of WINCHELL and HERZOG

further discloses wherein said accounting depends on the indicated number of

subscribers (HERZOG - page 847, page 847, abstract, Section I (paragraph 2-4),

Section II (paragraph 1-2); page 851, section IV-B).

Regarding claim 7, see the rejections of the parent claim concerning the subject

matter this claim is dependent upon. However, WINCHELL does not expressly disclose

wherein said accounting is performed differently for data transported from the mobile

communication network to the mobile station than for data transported from the mobile

station to the mobile communication network. In the same field of endeavor, HERZOG

discloses wherein said accounting is performed differently for data transported from the

mobile communication network to the mobile station than for data transported from the

mobile station to the mobile communication network (page 847, page 847, abstract,

Section I (paragraph 2-4), Section II (paragraph 1-2); page 851, section IV-B; cost

allocation dependent on upstream and downstream receivers). Therefore it would have

been obvious to a person of ordinary skill in the art at the time the invention was made

to modify WINCHELL to include the teachings of HERZOG, since HERZOG states that

such a modification would provide cost association based on a receivers network

usage.

Regarding claim 8, see the rejections of the parent claim concerning the subject matter this claim is dependent upon. The combination of WINCHELL and HERZOG further discloses wherein billing is only performed for data transported from the mobile communication network to the mobile station or performed for data transported from the mobile station to the mobile communication network (WINCHELL – paragraph 37, 38; HERZOG - page 847, page 847, abstract, Section I (paragraph 2-4), Section II (paragraph 1-2); page 851, section IV-B; WINCHELL discloses billing based on usage, while HERZOG teaches that usage cost can be associated by either an upstream or downstream usage). Furthermore, it has been held that the omission of an element and its function in a combination where the remaining elements perform the same functions as before involves only routine skill in the art. *In re Karlson*, 136 USPQ 184.

8.   Claims 4 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over WINCHELL et al (US 2002/0151321 A1) in view of HERZOG et al., IEEE/ACM Transactions of Networking, Vol. 5, No. 6, "Sharing the "Cost" of Multicast Trees: An Axiomatic Analysis" (hereinafter HERZOG), and further in view of BRISCOE et al (US 2005/0286488).

Regarding claim 4, see the rejections of the parent claim concerning the subject matter this claim is dependent upon. The combination of WINCHELL and HERZOG further discloses wherein said accounting comprises billing and a billing decreases with an increasing indicated number of subscribers (WINCHELL – paragraph 37, 38; HERZOG - page 847, page 847, abstract, Section I (paragraph 2-4), Section II (paragraph 1-2); page 851, section IV-B; WINCHELL discloses billing based on usage,

while HERZOG teaches that usage cost can be associated by either an upstream or downstream usage and cost to individual receivers can be decreased based on decrease usage compared to associated number of subscribers). However, the combination of WINCHELL and HERZOG does not disclose the use of a tariff. In the same field of endeavor, BRISCOE discloses wherein an accounting comprises billing and a billing tariff (abstract; paragraph 6, 37, 56). Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify WINCHELL to include the teachings of BRISCOE, since BRISCOE states that such a modification would allow a varied tariff to a plurality of users based on a determined usage parameter.

Regarding claim 5, see the rejections of the parent claim concerning the subject matter this claim is dependent upon. The combination of WINCHELL and HERZOG further discloses wherein said accounting comprises payment and a payment increases with an increasing indicated number of subscribers (WINCHELL – paragraph 37, 38, 45, 46). However, the combination of WINCHELL and HERZOG does not disclose the use of a tariff. In the same field of endeavor, BRISCOE discloses wherein an accounting comprises payment and a payment tariff increase (abstract; paragraph 6, 37, 56). Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify WINCHELL to include the teachings of BRISCOE, since BRISCOE states that such a modification would allow a varied tariff to a plurality of users based on a determined usage parameter.

9.   Claims 16-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over

WINCHELL et al (US 2002/0151321 A1) in view of WAHL et al (US 2002/0089985).

        Regarding claim 16, see the rejections of the parent claim concerning the subject

matter this claim is dependent upon. Although WINCHELL teaches the use of

encryption and authorization, WINCHELL does not expressly disclose wherein said

access enabling procedure comprises: sending one or more decryption keys to the

mobile station from which the request for accessing a point-to-multipoint service was

sent. In a similar field of endeavor, WAHL teaches wherein an access enabling

procedure comprises: sending one or more decryption keys to a mobile station from

which a request for accessing a point-to-multipoint service was sent (paragraph 6, 17).

Therefore it would have been obvious to a person of ordinary skill in the art at the time

the invention was made to modify WINCHELL to include the teachings of WAHL, since

such a modification would provide a secure connection between various communication

links in a multicast system.

        Regarding claim 17, see the rejections of the parent claim concerning the subject

matter this claim is dependent upon. The combination of WINCHELL and WAHL further

discloses wherein an individual decryption key is provided in dependence on one or

more of: each stored subscriber identification, each stored point-to-multipoint service

identification, and each pair of a subscriber identification and point-to-multipoint service

identification stored in association (WAHL – paragraph 6, 17, each subscriber

requesting connection is provided a decryption key).

Regarding claim 18, see the rejections of the parent claim concerning the subject

matter this claim is dependent upon. The combination of WINCHELL and WAHL further

discloses wherein said one or more decryption keys are generated dynamically in

response to receiving said request for accessing a point-to-multipoint service (WAHL –

paragraph 6, 17).

Conclusion

10.   The prior art made of record and not relied upon is considered pertinent to

applicant's disclosure.

CHANG et al (US 2002/0102967) – On demand multicast messaging system

BUHRKE et al (US 5,012,466) – Call service initialization arrangement

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to ARIEL BALAOING whose telephone number is

(571)272-7317. The examiner can normally be reached on Monday-Friday from 8:00

AM to 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, V. Paul Harper can be reached on (571) 272-7605. The fax phone number

for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

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USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/VINCENT P. HARPER/   /Ariel Balaoing/
Supervisory Patent Examiner, Art Unit 2617   Examiner, Art Unit 2617

/A. B./
Examiner, Art Unit 2617